

Application No. 10/640,553  
Amendment dated October 23, 2008  
Reply to Office Action of October 2, 2008

### REMARKS/ARGUMENTS

Applicant has carefully reviewed and considered the Office Action mailed on October 2, 2008, and the references cited therewith.

Claims 1, 3-21 and 23-26 are amended, claims 2 and 22 are cancelled, and claim 27 is added; as a result, claims 1, 3-21 and 23-27 are now pending in this application.

Applicant respectfully submits that claim 27 does not introduce any new subject matter and is intended to cover additional claimable subject matter fully supported by the originally filed specification.

#### § 112 Rejection of the Claims

Claims 1-26 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant respectfully traverses the rejection as follows.

The preamble of claim 1 is amended to clarify the nature of the method, and additional punctuation has been added to the preamble of claims depending from claim 1. Claims 9-14 and 22 are amended to delete the phrase "such as." Claim 19 is amended to delete reference to a trade name. Claims 1 and 26 are amended with respect to mold data.

As such, Applicant respectfully submits that claims 1-21 and 22-26 particularly point out and distinctly claim the subject matter which Applicant regards as the invention, and are thus not indefinite. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 112, second paragraph, rejection of claims 1-21 and 22-26.

#### §103 Rejection of the Claims

Claims 1, 2, and 6-25 were rejected under 35 USC § 103(a) as being unpatentable over Bellafiore (U.S. Patent No. 4,735,759) in view of Widmer, et al.

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(U.S. Patent No. 6,540,045). Applicant respectfully traverses the rejection as follows.

The Bellafiore reference appears to be directed to physically using a positive impression of the auditory canal as a void in creating a negative hearing aid mold (col. 3, lines 43-67; Figs. 1-3). Page 3 of the Office Action mailed on October 2, 2008 summarizes the Bellafiore reference as describing taking an impression of the auditory canal and then uses these dimensions to create a negative hearing aid mold by casting a mold material around the impression.

The Office Action acknowledges that the Bellafiore reference lacks a showing of "processing . . . measurement data representing the dimensions of the auditory canal to generate outside auditory canal dimension data," and looks to the Widmer reference to teach making hearing aid shells directly from digital data obtained (alleged to be "processed" according to page 3 of the Office Action) from an impression of the auditory canal. Applicant respectfully disagrees with this assessment of the Widmer reference.

From Applicant's review, the Widmer reference appears to describe a method for manufacturing an ear device (Title; Abstract). That is, the Widmer reference appears to primarily be concerned with an additive build-up process of an ear device, or its shell, from digitized 3D shape data (e.g., col. 4, lines 2-9, and 39-46). Contrary to page 3 of the Office Action, the Widmer reference does not appear to teach making hearing aid shells directly from digital data obtained from an impression of the auditory canal. The Widmer reference appears to be silent as to how 3D digital data is obtained (col. 1, lines 62-66; col. 6, lines 20-28).

However, the Widmer reference appears to explicitly states it is directed to eliminating the drawbacks associated with forming a ear device by taking an individual mold of the auditory canal (col. 1, lines 61-62; drawbacks set forth at col. 1, lines 22-60). The Widmer reference appears to describe that the area of the ear device undergoes a substantial dynamic (i.e., change of shape through body movement/use). The Widmer reference seems to suggest that several measurements of the auditory canal under various dynamic configurations thereof, with a single

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shape (e.g., cavity) can be determined by registering (i.e., aligning) the various measurements (col. 2, lines 4-19). This would suggest a direct measuring process, rather than a molding process. Applicant respectfully suggests that the Widmer reference teaches away from taking an impression and measuring the outside dimensions of the impression to generate outside auditory canal measurement data. Indeed, combining these references would appear to defeat the purpose of Widner. As such, Applicant respectfully submits that one having ordinary skill in the art would not be motivated to modify the Bellafiore reference with the processing features set forth in the Widmer reference, as suggested in the Office Action.

In contrast, claim 1, as amended, is directed to a method for making a negative hearing aid mold, and presently recites:

taking an impression of the auditory canal;  
measuring the outside dimensions of the impression to generate outside auditory canal measurement data;  
processing auditory canal dimension measurement data representing dimensions of an auditory canal to generate outside auditory canal dimension data that represents outside dimensions of the auditory canal;  
processing the outside auditory canal dimension data to generate mold data; and  
creating a negative hearing aid mold from the mold data, having an inside surface with dimensions the same as the outside dimensions of the auditory canal, the negative hearing aid mold being suitable for receipt of a soft solid.

Furthermore, the Widmer reference appears to describe an additive build-up process for generating "an ear device, or the shell thereof" directly, rather than generating a negative hearing aid mold (from which a hearing aid is formed), as claimed.

Thus, neither the Bellafiore or the Widmer references appear to teach "measuring the outside dimensions of the impression to generate outside auditory canal measurement data" since the Bellafiore reference does not appear to describe measuring the outside dimensions of the impression, and the Widmer reference appears to teach away from using an impression. Therefore, the Bellafiore and Widmer references, either alone or in combination, do not appear to describe, teach

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or suggest each and every claimed limitation. Accordingly, Applicant respectfully submits that the claimed invention is neither taught by, nor made obvious in view of, the combination of the Bellafiore and Widmer references, and respectfully requests reconsideration and withdrawal of the 103 rejection of independent claim 1, as well as those claims that depend therefrom.

Claims 3-5 and 26 were rejected under 35 USC § 103(a) as being unpatentable over Bellafiore (U.S. Patent No. 4,735,759) in view of Widmer, et al. (U.S. Patent No. 6,540,045) and Jordan, et al. (U.S. Patent No. 6,152,731). Applicant respectfully traverses the rejection as follows.

With respect to claims 3-5, as amended, each of claims 3-5 depend indirectly from independent claim 1. For the reasons provided above with respect to the 103 rejection of independent claim 1, Applicant respectfully submits that independent claim 1 is allowable in view of the Bellafiore and Widmer references. From Applicant's review, the deficiencies of the Bellafiore and Widmer references with respect to independent claim 1 is not cured by the Jordan reference. That is, the Bellafiore, Widmer, and Jordan references, either alone or in combination do not describe or teach measuring the outside dimensions of the impression to generate outside auditory canal measurement data.

As such, Applicant respectfully submits that each and every element and limitation of the invention, presently claimed in independent claim 1, is neither described, taught or suggested by, nor made obvious in view of, the Bellafiore, Widmer, and Jordan references. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of dependent claims 3-5, which depend from allowable claim 1.

With respect to independent claim 26, as amended, claim 26 provides a method for making a negative hearing aid mold, and presently recites:

taking an impression of an auditory canal;

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measuring the outside dimensions of the impression to generate outside auditory canal measurement data;

processing laser measured auditory canal dimension measurement data representing dimensions of the auditory canal to generate outside auditory canal dimension data that represents outside dimensions of the auditory canal, with the laser measured auditory canal dimension measurement data obtained with a laser measurement system;

processing the outside auditory canal dimension data to generate outside mold data; and

creating a negative hearing aid mold from mold data, having an inside surface with dimensions the same as the outside dimensions of the auditory canal, with the negative hearing aid mold suitable for receipt of a soft solid.

As set forth above with respect to independent claim 1, one skilled in the art would not be motivated to modify the physical mold making approach taught by the Bellafiore reference with the teachings of the Widmer reference for at least the following reasons. The Widmer reference does not appear to teach measuring the outside dimensions of an impression. In fact, the Widmer reference seems to teach away from using an impression at all as not being able to capture dynamic auditory canal dimensions. While the Jordan reference describes movable portions of dental anatomy, it does not appear to address the issue of dimensions of the cavity being measured changing through bodily movement. As such, the Jordan reference does not appear to cure the deficiency in the Widmer reference.

The Widmer reference appears to teach an additive build-up process to create an ear device or the shell thereof directly, and thus does not appear to teach creating a negative hearing aid mold suitable for receipt of a soft solid. Again, the Jordan reference does not appear to cure the deficiency in the Widmer reference. In particular, the Jordan reference does not appear to teach or suggest using creating a negative (hearing aid) mold from measured digital data.

In addition, the Jordan reference appears to be directed to methods for use in dental articulation. The claims of the present application include limitations concerning the auditory canal. Applicant respectfully submits that the Jordan

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reference in the dental arts is not analogous art to the other cited references or the present disclosure. Furthermore, the Jordan reference appears to be directed to a specific procedure in the dental arts, dental articulation. The problem of modelling articulation between two corresponding (hinged) physical components, e.g., dental arches, need not be addressed in measuring an auditory canal. Thus, Applicant respectfully submits that one having ordinary skill in the art would not look to the Jordan reference, nor have reason to modify the Bellafiore reference in the manner suggested by the Office Action, without benefit of the disclosure of the present application.

As such, Applicant respectfully submits that each and every element and limitation of the invention, presently claimed in independent claim 26, is neither described, taught or suggested by, nor made obvious in view of, the Bellafiore, Widmer, and Jordan references. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of independent claim 26.

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### CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's below listed attorney at (612) 236-0120 to facilitate prosecution of this matter.

**CERTIFICATE UNDER 37 C.F.R. §1.8:** The undersigned hereby certifies that this correspondence is being transmitted to the United States Patent Office facsimile number (571) 273-8300 on October 23, 2008.

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